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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/983,605 05/01/98 RODER

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EXAMINER

HM12/0802

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CHAKRABARTI, A

ART UNIT

PAPER NUMBER

1655

DATE MAILED:

08/02/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/983,605

Applicant(s)

Roder

Examiner

Arun Chakrabarti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 9, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-17 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

Election/Restriction

1. In response to the restriction requirement of one pair of nucleotide primer, the applicant requested to examine ten nucleotide primer pairs with traverse. The traversal is on the ground(s) that there is no burden in examining the extra nine pair of nucleotides. This is not found persuasive because as the restriction makes clear, additional searches of 18 more nucleotides requires extensive searches in all nucleic acid databases. Review of these additional searches is prima facie evidence of burden which is not rebutted.

The requirement is still deemed proper and is therefore made FINAL. Only SEQ ID Nos: 1 and 2 are hereby being examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 14 is rejected over the recitation of the letter "n". In absence of a definition of "n", it is not clear if the number zero is claimed or the number infinite is claimed or any number in between is claimed. The metes and bounds of the claims are vague and indefinite.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CAR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 14 and 17 are rejected over Morgante et al. (U.S. Patent 5,955,276) (September 21, 1999) in view of Mets et al. (U.S. Patent 5,332,408) (July 26, 1994).

Morgante et al teach a method of genotyping plants at a microsatellite locus (Abstract), the method comprising;

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a) amplifying chromosomal DNA with oligonucleotide primer pairs specifically hybridizing to the locus of a region of the chromosomal DNA, wherein the region of the DNA comprises a repeated dinucleotide motif comprising at least one of the following selected from the group consisting of (GA:CT)_n, (GT:CA)_n, (AT:TA)_n, to obtain an amplification product (Column 26, line 60 to column 30, line 13 and Claim 1 and Table II),

b) size fractionating the amplification product to provide a measure of the motif of the chromosomal DNA between the primer pairs (Figures 2-6),

wherein the size of the amplification product is polymorphic for the locus and provides a genotype for the plants (Figures 2-6 and Column 34, line 45 to Column 36, line 24 and Examples 1-3).

Morgante et al teach a method further comprising the step of using the resulting genotype for a further step chosen from genome fingerprinting and whole genome comparisons (Column 6, lines 3-13).

Morgante et al do not teach a method of genotyping plants of the *Triticum aestivum* species.

Mets et al teach the plants of the *Triticum aestivum* species (Column 5, lines 50-58).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to combine and substitute the plants of the *Triticum aestivum* species of Mets et al. into the method of genotyping plants of Morgante et al., since Mets et al. state, "Existing crop plants useful as the source of specific nucleic acid probes of the invention include

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but are not limited to corn, rye, wheat (*Triticum aestivum* and *Triticum turdigum*) (Column 5, lines 50-58)." Further motivation is provided by Morgante et al as Morgante et al state, "Applicant believe that the method of their invention greatly facilitates the simultaneous identification of multiple genomic polymorphisms, both codominant and dominant. Thus, the present method offers great advantage in identifying polymorphic markers linked to genetic traits of interest, and also offers an efficient and convenient generic technique for genomic fingerprinting and whole genom comparisons (Column 6, lines 6-13). By employing scientific reasoning, an ordinary artisan would have combined and substituted the plants of the *Triticum aestivum* species of Mets et al. into the method of genotyping plants of Morgante et al. in order to improve the production of specific nucleic acid probes. An ordinary practitioner would have been motivated to combine and substitute the plants of the *Triticum aestivum* species of Mets et al. into the method of genotyping plants of Morgante et al. in order to achieve the express advantages, as noted by Mets et al., of studying and developing existing crop plants useful as the source of specific nucleic acid probes and also in order to achieve the express advantages, as noted by Morgante et al., of a method that greatly facilitates the simultaneous identification of multiple genomic polymorphisms, both codominant and dominant and offers great advantage in identifying polymorphic markers linked to genetic traits of interest, and also offers an efficient and convenient generic technique for genomic fingerprinting and whole genom comparisons.

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Allowable Subject Matter

6. In absence of any prior art teaching or suggesting the primers having SEQ ID Nos: 1 and 2, no prior art rejection is made against the claims 15 and 16.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D., whose telephone number is (703) 306-5818. The examiner can normally be reached on 7:00 AM-4:30 PM from Monday to Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (703) 308-1152. The fax phone number for this Group is (703) 305-7401. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Arun Chakrabarti,

Patent Examiner,

July 20, 2001


JEFFREY FREDMAN
PRIMARY EXAMINER